BUCKSLIP

To: Russ Earle
From: Max de Vries
Date: September 28, 1993
Subject: WTC: INSPECTION OF CORE CLOSETS IN AC SHAFTS, A AND B TOWERS

Copy: N. Chanfrau, G. Cummiskey ✓

As a result of the recent fire in a storage closet on the 59th floor of A Tower, a survey was conducted of core closets in both towers during September 15 through 24. I participated in the survey which included members of the World Trade Division Planning Group.

The fire on the 59th floor was in a closet at the base of a 16 story shaft originating at the 75th floor MER. The concrete block-walled shaft contains vertical return air ducts. Twelve shafts of this type run 16 floors up and 16 floors down from the MER's in each tower. Closets in the base of shafts such as above might be found at 25, 59 and 92. From these original suspected floors, the survey was expanded to include 24 floors of A Tower and 28 floors of B Tower.

Closets in the base of shafts were located on the 25th and 59th floors of both towers. None were equipped with sprinklers or smoke detectors in A Tower. In B Tower, the 25th floor closets are equipped with sprinklers (this was confirmed in all but one which was not accessible). Closets inspected on 59 of both towers had no sprinklers. All these closets are in use or accessible by tenants. They are shown on the base building drawings. Several door openings, not shown on the drawings, accessing pipe shafts were discovered. These are located in B Tower on 105 (floor vacant and under construction), 93 (floor occupied) and 89 (floor occupied). All of these doors were chained and padlocked but only the one on 105 was identified as an open shaft. On several floors, holes had been cut into the wall separating the sprinkler/janitor closet and a pipe and AC shaft, requiring repair/sealing to the fire rating level of the breached wall.

A letter detailing the survey has been written and will be distributed by WTD Planning shortly. A draft is attached for your information. It recommends that tenants be denied access to the spaces whether currently protected or not, and that all be sprinkler protected. It also recommends a complete floor by floor survey by WTC Plant & Structures personnel.

Max A. de Vries
Fire Protection Engineer

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY

MEMORANDUM

TO: R. DiChiara
FROM: G. Gaeta
DATE: September 27, 1993
SUBJECT: **MECHANICAL SHAFT ACCESS AND USE INSPECTION**

COPY TO: R. Bisaccio(36S), T. Cancelliere(B2-211), J. Casale(36S), N. Chanfrau(PATC-43), R. Cronin(35E), M. deVries(PATC-43), C. Guzman(35N), D. Karpiloff(35N), C. Maikish(35E), P. Marchese(36S), L. Norcia(B2-211), T. O'Connor(35N), J. Picone(35N), A. Reiss(35E), G. Rossi(35E), J. Todaro(36S), G. Wenger(35S)

MECHANICAL SHAFT ACCESS AND USE INSPECTION

An inspection of the exterior walls of the mechanical shafts in the Towers was completed on September 15th thru 24th, 1993. Twenty-four floors of Tower A and twenty-eight floors of Tower B were inspected. In general with minor exceptions, the shafts are not accessible by tenants and the tenants have not tried to use the space.

The following recommendations are proposed:

1. All shaft terminations must be sprinklered.

2. Shaft termination will not be rented for any use.

Why not ? ⇒ if protected ?

3. Rentals will instruct tenants to remove all materials from shaft closets, and immediately start negotiations to remove the closets from the leases. Rentals will inform WT Plant & Structures when the closets are empty so that locks can be changed and sprinklers installed.

4. All shaft closets will be marked (similar to electric and telephone closets), with signs posted (DO NOT BLOCK) (DO NOT ENTER) as appropriate. All shaft closets will have tamper proof locks and be rekeyed. All mechanical shaft closets should be inspected and maintained (free of debris and combustibles) by WTC Plant and Structures Mechanical Group on a regular schedule.

5. During tenant alterations, shaft access and signing will be monitored. Empty tenant space should be inspected before new tenants move in.

6. World Trade Plant & Structures must establish a routine to inspect tenant occupied space semi-annually. This will ensure that tenants have not accessed shaft areas. This inspection might include telephone and electrical closets to look for unauthorized tenant usage. Special attention should be paid to spaces rented to WTC contractors. Contractors are more likely to access shaft areas and closets.

7. Problem areas/Requiring Immediate Attention:

A. A-25 Clean out and lock closets. Closets are to be sprinklered and tenants will not be using them for storage.

B. B-59 Clean out and lock closets. Closets are to be sprinklered and tenants will not be using them for storage.

C. Inspect Mechanical Shaft closets at Column 705 (All floors Tower A) and remove debris. WTC Plant & Structures Mechanical Division to set standards for storage and cleanliness.

D. A-81 Fix door and lock, inspect and lock closet at Column 507. Closets are to be sprinklered and tenants will not be using them for storage.

E. A-74 Inspect shafts in tenant space north east side, break tenant lock if necessary. Closets are to be sprinklered and tenants will not be using them for storage.

F. B-25 Inspect closet at Column 507. Closets are to be sprinklered and tenants will not be using them for storage.

G. B-24 Close hole in closet wall at Column 904. Repair hole.

H. B-61 Close hole in closet wall at Column 904. Repair hole.

I. A-89 No access to Suite 8969, Esco Leasing, WT Rentals to contact tenant.

J. B-81 WT Plant & Structures to inspect closet near Column 501. Break in if required.

Max — after this survey and your studying the report thereof you can visit any ones you have questions or doubts about.

8. This survey will be expanded to complete the inspection of all mechanical shaft areas in the WTC complex. (Including areas not accessed in this first inspection). This will require coordination of tenant and mechanical groups with the inspection teams. These teams will initiate work order areas requiring immediate attention.

9. WTC Plant and Structures Mechanical Division will respond with procedures for maintaining and inspecting shafts to include instruction for tenants, consultants, contractors, construction and mechanical personnel. These procedures will include security, and an inspection schedule.

TOWER A - DETAILS OF INSPECTION

FLOOR

A-9 Floor was under construction. There was only one penetration. The steam shaft on the north side of the core had an access hatch which was marked, "DO NOT BLOCK STEAM SHAFT". Inspector: Casale.

A-24 No penetrations. No tenant access. Interior Closet at Column 705 unsprinklered. Used for storage of cleaning equipment. Inspectors: Picone, Todaro, Casale.

A-25 This floor is at the bottom of the shafts from the 41st floor M.E.R. eight shaft closets are shown on the drawings. Three closets on the south side were empty and contained a small amount of clutter, one of these had empty shelving in it. The closet between Columns 502 & 503 (south side) was full of contractor's materials and equipment, including some 1 gallon containers marked, "COMBUSTIBLE". The closet between Column 1002 & 1003 (north side) was cluttered with old telephone equipment, garbage and other debris. None of the closets inspected were sprinklered. Inspectors: Picone, Todaro, Casale.

A-26 No penetrations. No tenant access. Inspectors: Picone, Todaro, Casale. North side: Todaro, deVries.

A-27 No penetrations. No tenant access to shafts. Closet at Column 705 filled with debris. Inspectors: Picone, Todaro, Casale. Rest of floor OK. Inspectors: Todaro, deVries.

A-40 No penetrations. Three shafts with steel grating floors were inspected and some debris consisting of fallen insulation and bailing wire noted at two locations. Inspector: Casale. South east corner OK. Inspectors: Todaro, deVries.

A-43 An access panel, 2 X 2, south side (on wall by scale in cafeteria) not shown on drawing. No other penetrations. Inspector: Casale.

A-58 No penetrations. Shaft at Column 507 grating floor - clean, locked. Inspectors: Picone, Todaro, Casale.

A-59 Fire Floor - No access to fire site. Two shaft closets on north west core were being used by tenant. Shaft at Column 705 used for mechanical storage-messy. All other shafts OK. Inspectors: Picone, Todaro, Casale.

A-60 No penetrations. No tenant access to shafts. Inspectors: Picone, Todaro, Casale. South west corner Inspectors: Todaro, deVries.

A-61 No penetrations. No tenant access to shafts. Inspectors: Picone, Todaro, Casale.

A-73 No penetrations. No tenant access to shafts. Inspector: Casale.

A-74 No penetrations. 2 shafts with steel grating floors clean (some fallen insulation-bailing wire) north east portion not inspected, Locked out by tenant. Supervisor had key. No one knew where he was. Inspector: Casale.

A-80 No penetrations. No tenant access to shafts. Closet at Column 705 cluttered with debris. Inspectors: Todaro, Casale.

A-81 No penetrations. No tenant access to shafts. Shaft at north east corner of core, lock is broken, door is jammed. Could not inspect. It looks as if some one tried to gain access. Tenant says they do not use and have not tried to enter shaft. Inspectors: Todaro, Casale

A-82 No penetrations. All OK. Inspectors: Todaro, Casale.

A-83 No penetrations. Most of floor unoccupied. Inspectors: Todaro, Casale.

A-89 No penetrations. No tenant access to shafts. No access to Suite 8969. Sign on doors says,"ESCO LEASING". Inspectors: Casale, Todaro, deVries, Blumenfeld.

A-90 No penetrations. No tenant access to shafts. Inspectors: Casale, Todaro, Blumenfeld, deVries.

A-91 No penetrations. No tenant access to shafts. Insapectors: Todaro, Casale.

A-92 No penetration. No tenant access to shafts. Inspectors: Todaro, Casale.

A-105 No penetrations. No tenant access to shafts. Inspector: Casale.

A-106) No penetrations. No tenant access to shafts. Both floors have

A-107) Decorative treatments which hide many areas of core walls. Inspector: Casale.

TOWER B

The inspection team (Guzman, deVries, Blumenfeld) from Tower B found the same type of problems to a lessor extent on Floors 25 and 59 (Debris-cluttered shaft closets). On the 25th floor they reported that shaft closets are sprinklered. They did however, report the rest of the building to be in good shape. Guzman and Todaro were able to inspect additional floors: 7, 8, 41, 42 and 75.

B-7 No penetrations. Mechanical MER. Inspectors: Guzman and Todaro.

B-8 No penetrations. Upper level MER. Inspectors: Guzman and Todaro.

B-9 No penetrations. Inspectors: Guzman and Todaro.

B-24 Closet at Column 904 has hole in north wall into AC shaft. Inspectors: Guzman, deVries, Blumenfeld.

B-25 No penetrations. Two west side closets were empty, closet at Column 507 was locked and could not be opened. Three east side closets were being used by tenants. All closets were sprinklered. Inspectors: deVries.

B-26 No penetration. Inspector: deVries.

B-27 No penetrations. Inspectors: Guzman, deVries, Blumenfeld.

B-40 No penetrations. Closets were clean. Inspectors: Guzman and Todaro.

B-41 No penetrations MER. Inspectors: Guzman and Todaro.

B-42 No penetrations Upper MER. Inspectors. Guzman and Todaro.

B-43 No penetrations. Inspectors: Guzman and Todaro.

B-58 No penetrations. Vacant floor. Inspectors: Guzman, deVries, Blumenfeld.

B-59 No penetrations. Closet on west wall near 507 was being used for storage, unsprinklered. Inspectors: Guzman, deVries, Blumenfeld.

B-60 No penetrations. Inspectors: Guzman, deVries, Blumenfeld.

B-61 Closet at Column 904 had a hole in north wall into the AC shaft. Inspectors: Guzman, deVries, Blumenfeld.

B-73 No penetrations. Inspectors: Guzman, deVries, Blumenfeld.

TOWER B

B-74 No penetrations. Inspectors: Guzman and Todaro.

B-80 No penetrations. Inspectors: deVries and Blumenfeld.

B-81 No penetrations. Closet near Column 501 locked. Tenant could not access. Inspectors: deVries and Blumenfeld.

B-82 No penetrations. Inspectors: deVries and Blumenfeld.

B-83 No penetrations. No access to west side. Unoccupied tenant space. Inspectors: deVries and Blumenfeld.

B-89 Doorway in shaft at Column 308, not shown on drawings. Rest of floor OK. Inspectors: deVries, Blumenfeld.

B-90 No penetrations. No tenant access to shafts. Inspectors: deVries, Blumenfeld.

B-91 No penetrations. No tenant access to shafts. Inspectors: deVries, Blumenfeld.

B-92 No penetrations. No tenant access to shafts. Inspectors: deVries, Blumenfeld.

B-105 Floor under construction. Door on pipe shaft near column 506 padlocked with a sign "OPEN SHAFT". Inspector: deVries.

B-106 No penetrations. Inspectors: deVries and Blumenfeld.

B-107 No penetrations. Inspectors: deVries and Blumenfeld.

In closing, I would like to thank John Picone, Cesar Guzman, Joe Casale, Max deVries, Victor Blumenfeld and Joe Todaro for their efforts in performing these inspections in a very tight time schedule.

Gerard Gaeta, RA
Supervisor of Tenant Services
Planning & Design Division

GG/JC/bw

65N is a floor/wing under construction by the PA and was the source of the ignition elements for the fire on 59 N at the base of the shaft. There are holes in the gyp board shaft wall into 65N.